



DECUS

PROGRAM LIBRARY

DECUS NO.	8-200
TITLE	BOSS
AUTHOR	Dr. A. S. French
COMPANY	Submitted By: Dr. R. B. Stein University of Alberta Edmonton, Alberta, Canada
DATE	May 23, 1969
SOURCE LANGUAGE	PAL III

DECUS

REPORT FORM



"BOSS" AN INVISIBLE EXECUTIVE PROGRAM
FOR THE PDP-8 DISC MONITOR SYSTEM

DECUS Program Library Write-up

DECUS No. 8-200

GENERAL DESCRIPTION

"BOSS" is available in two versions for the disc and DECTape systems. The disc version is the only version presently distributed, as the DECTape version has not been fully tested. Anyone interested in attempting the DECTape version should contact the author at the University of Alberta. Disc BOSS is a two-page program while DECTape BOSS occupies three pages. BOSS functions by interrogating the user to obtain a list of the programs that the user requires. Using this information and other information obtained by inspecting the system directory blocks and storage allocation maps, a "BOSS-HEAD" is constructed and placed in the top page of core starting at 7600. BOSS-HEAD is entered at the completion of each program either by the program jumping to 7600, as it would normally exit to monitor, or by the user stopping his program and loading 7600 and starting. BOSS-HEAD then calls BOSS from the device and provides it with the directory number of the next program in the list. BOSS calls in the directory from the system device, locates the file, and after calling in MONITOR gives the name of the program to the first page of GET. GET then loads the file into core and starts it at the correct location. At the end of a list, BOSS rings the bell and waits for the users reply through the keyboard. CONTROL-C causes BOSS to bootstrap MONITOR HEAD back into the top page of core and enter MONITOR HEAD. A different character causes BOSS to restart the list of programs at the beginning again.

INITIALIZING THE BOSS SYSTEM

Select the binary tape suitable for the device to be used and load into core using the system load program with one pass and return to MONITOR.

```
.LOAD  
IN-T:  
OPT-1  
ST=7600   ETC.
```

BOSS should now be saved on the system device as a system file. (Note that BOSS should be saved before being used.)

```
.SAVE BOSS! 200-577;400
```

```
(DECTAPE: SAVE BOSS! 200-777;400)
```

BOSS may now be used when desired by calling in the usual manner

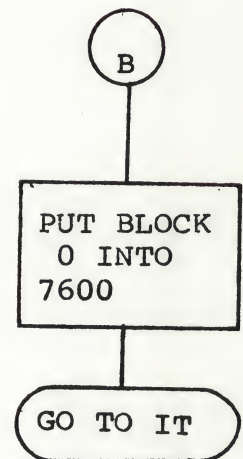
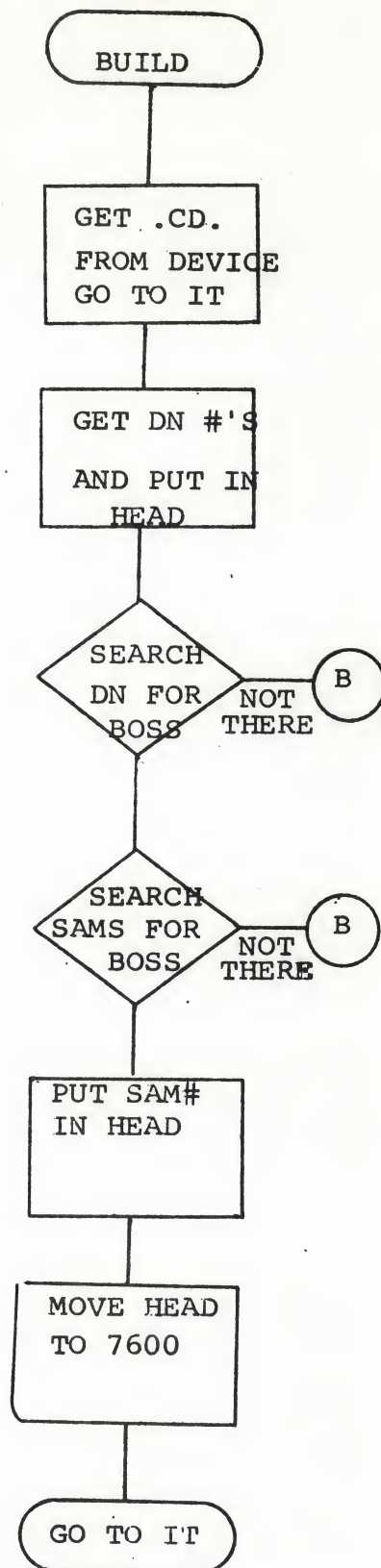
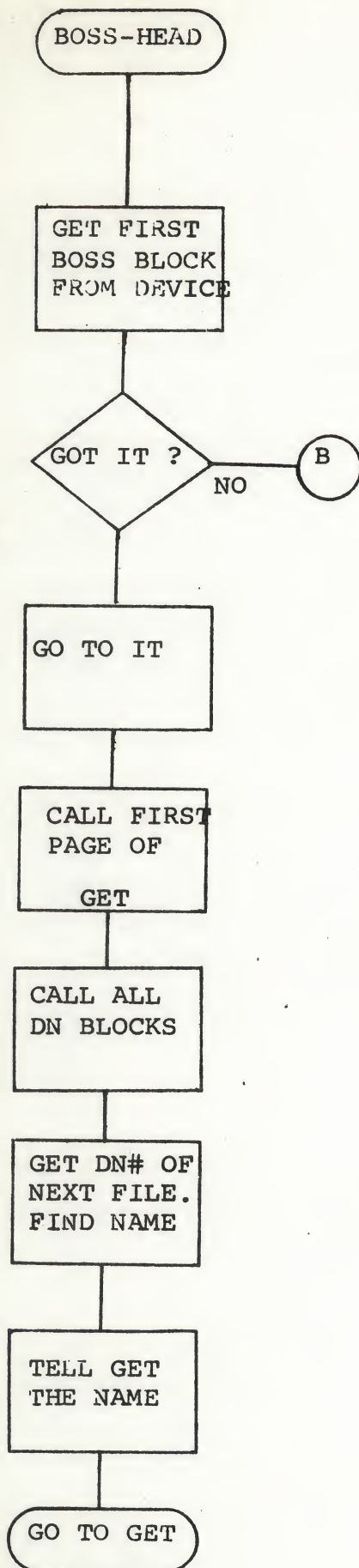
```
.BOSS
```

```
IN-S:NAME,S:NAMF,S:NAMG ----- (CARRIAGE RETURN)
```

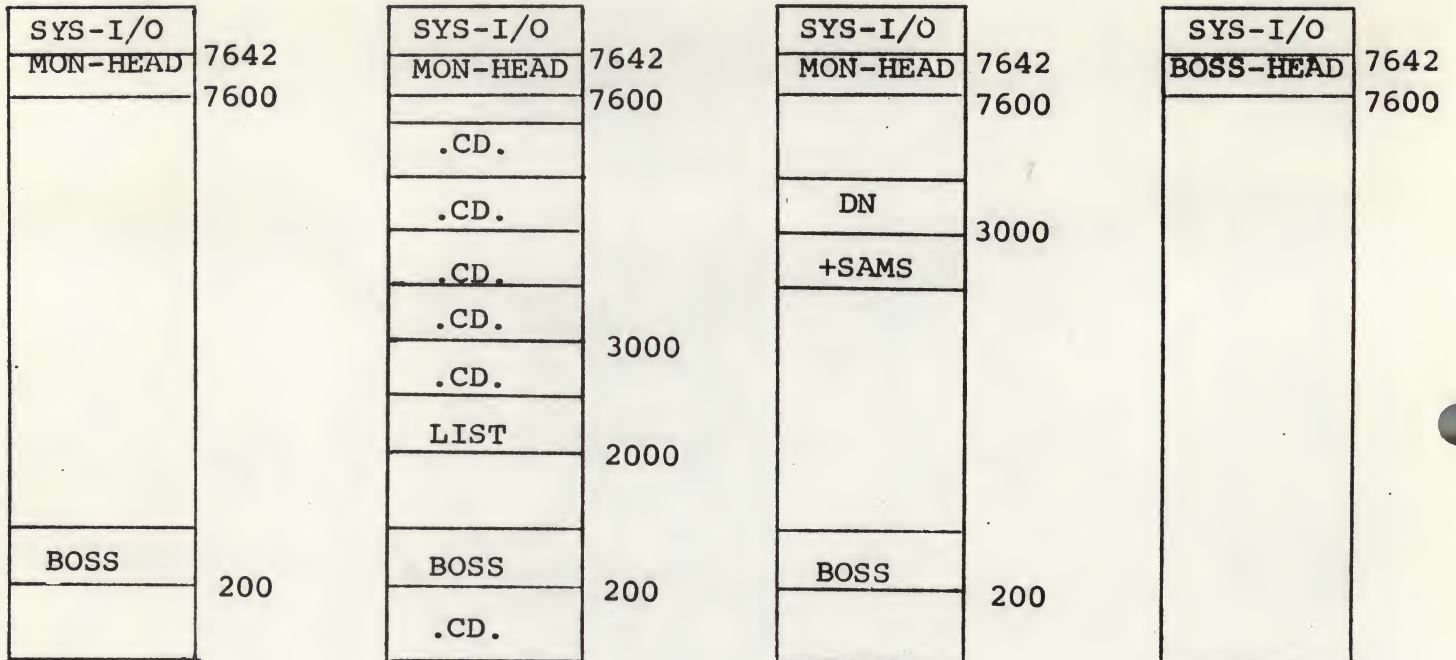
BOSS requests the list of programs to be used and will accept up to nine system files as acceptable input. File names to be used must start with a letter. BOSS will now run as previously described for as many cycles as are required by the user.

If it is desired to return to MONITOR at some other time than the end of a set of programs, or if a fault occurs, MONITOR may be reobtained and the MONITOR HEAD replaced by entering the BOSS bootstrap routine directly. This is achieved by loading 7606 and starting the computer. Since BOSS never writes on the system device while in use, the device protection circuits may be used throughout a series of programs. Note that when saving BOSS it must be saved as a system program and the name BOSS must be used.

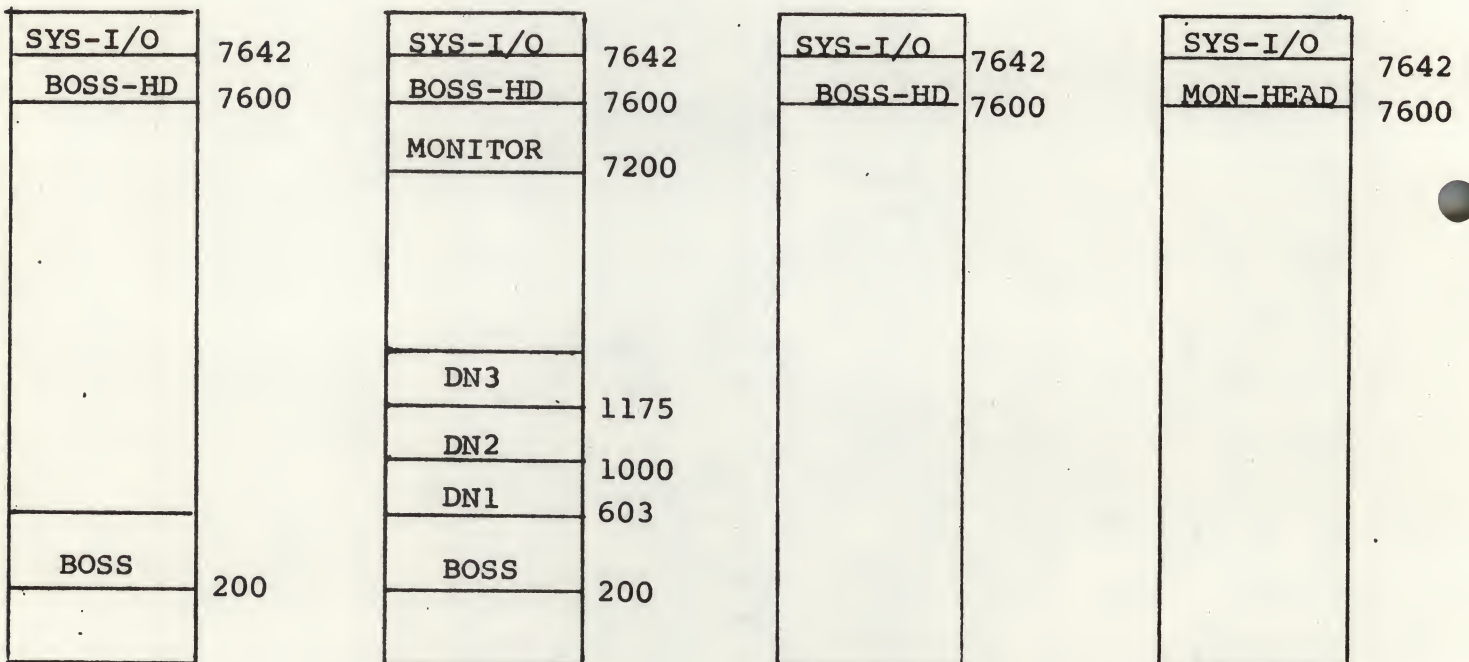
Note: Location 234 contains the code 6346 which is an AXØ8 instruction (clear the enable register). If different peripheral equipment is being used, this instruction may be changed to whatever is suitable.



CORE USED DURING OPERATION OF "BOSS"



BUILD



CALL

EXIT

DCEA=6611
 DMAR=6603
 DFSC=6622
 ZTEN=6342
 OTEN=6344
 FIXTAB

/ "BOSS" AN EXECUTIVE PROGRAM.A.S.FRENCH.(APRIL-69).
 *200

0200	6032	BOSHED, KCC	/BOSS-HEAD START.
0201	4210	JMS BLKGET	
0202	0000	BSSBLK, 0	
0203	0200	200	
0204	5605	JMP I CHEIF	
0205	0231	CHEIF, MAIN	
0206	2205	FAIL, ISZ CHEIF	
0207	5200	JMP BOSHED	
0210	0000	BLKGET, 0	
0211	1610	TAD I BLKGET	
0212	2210	ISZ BLKGET	
0213	3221	DCA BLOC	
0214	1610	TAD I BLKGET	
0215	2210	ISZ BLKGET	
0216	3222	DCA CORE	
0217	4626	JMS I SYSIO	
0220	0003	FUNCTN, 3	
0221	0000	BLOC, 0	
0222	0000	CORE, 0	
0223	0000	LINK, 0	
0224	5206	JMP FAIL	
0225	5610	JMP I BLKGET	
0226	7642	SYSIO, 7642	
0227	7630	POINT, LIST+7400	
0230	7630	LIST+7400	
0231	5233	MAIN, JMP .+2	
0232	5335	JMP BOOT	
0233	6002	IOF	
0234	6346	ZTEN OTEN	
0235	4210	JMS BLKGET	
0236	0010	10	
0237	7200	7200	
0240	4210	DNGET, JMS BLKGET	
0241	0202	202	
0242	1175	1175	
0243	4210	JMS BLKGET	
0244	0201	201	
0245	1000	1000	
0246	4210	JMS BLKGET	
0247	0177	177	
0250	0603	603	
0251	1777	TAD I (7627	
0252	3227	DCA POINT	
0253	2777	ISZ I (7627	
0254	1627	TAD I POINT	
0255	7450	SNA	
0256	5347	JMP CYCLE	
0257	7041	CIA	
0260	3240	DCA DNGET	
0261	1376	TAD (5	
0262	2240	ISZ DNGET	
0263	5261	JMP .-2	
0264	1277	TAD DCORE	
0265	3010	DCA 10	

0266	1410		TAD I 10
0267	7500		SMA
0270	5335		JMP BOOT
0271	3775		DCA I (7201
0272	1410		TAD I 10
0273	3774		DCA I (7202
0274	5773		JMP I (7210
0275	7600	MONITR,	7600
0276	0230	ARROW,	LIST
0277	0600	DCORE,	600
0300	7240	MOVE,	CLA CMA
0301	1372		TAD (2000
0302	3010		DCA 10
0303	1410	LOOP,	TAD I 10
0304	7001		IAC
0305	7450		SNA
0306	5314		JMP END
0307	1371		TAD (-6001
0310	3676		DCA I ARROW
0311	2276		ISZ ARROW
0312	3410		DCA I 10
0313	5303		JMP LOOP
0314	3676	END,	DCA I ARROW
0315	4770	SEARCH,	JMS DNSRCH
0316	4257		4257
0317	6363		6363
0320	3202		DCA BSSBLK
0321	7240		CLA CMA
0322	1275		TAD MONITR
0323	3010		DCA 10
0324	1334		TAD HEAD
0325	3011		DCA 11
0326	1411		TAD I 11
0327	3410		DCA I 10
0330	2333		ISZ KNTR2
0331	5326		JMP --3
0332	5675		JMP I MONITR
0333	7736	KNTR2,	-42
0334	0177	HEAD,	BOSHED-1
0335	6032	BOOT,	KCC
0336	1367		TAD (-202
0337	3766		DCA I (7750
0340	1367		TAD (-202
0341	3765		DCA I (7751
0342	6611		DCEA
0343	6603		DMAR
0344	6622		DFSC
0345	5344		JMP --1
0346	5675		JMP I MONITR
0347	6032	CYCLE,	KCC
0350	1364		TAD (207
0351	6046		TLS
0352	6031	READ,	KSF
0353	5352		JMP --1
0354	6036		KRB
0355	1363		TAD (-203
0356	7650		SNA CLA
0357	5335		JMP BOOT
0360	1230		TAD POINT+1
0361	3777		DCA I (7627
0362	5231		JMP MAIN

0363	7575	
0364	0207	
0365	7751	
0366	7750	
0367	7576	
0370	0417	
0371	1777	
0372	2000	
0373	7210	
0374	7202	
0375	7201	
0376	0005	
0377	7627	
0400	1377	PAGEBUILD,
0401	3350	DCA DNLINK
0402	1350	TAD DNLINK,
0403	3172	DCA 172
0404	1376	TAD (7530
0405	3175	DCA 175
0406	1375	TAD (2000
0407	3174	DCA 174
0410	7040	CMA -
0411	3167	DCA 167
0412	1216	TAD RETURN
0413	3177	DCA 177
0414	4337	JMS DNBLKI
0415	5774	JMP I (3001
0416	0300	RETURN, MOVE
0417	0000	DNSRCH, 0
0420	1617	TAD I DNSRCH
0421	3365	DCA DNT1
0422	2217	ISZ DNSRCH
0423	1617	TAD I DNSRCH
0424	3366	DCA DNT2
0425	2217	ISZ DNSRCH
0426	3364	DCA DNSAMC
0427	1354	TAD DNSTRT
0430	3350	DCA DNLINK
0431	4337	DNINP1, JMS DNBLKI
0432	1355	TAD DNKT
0433	3363	DCA DNKTR
0434	1345	TAD DNFUNC
0435	1347	TAD DNCORE
0436	3367	DCA DNT3
0437	1767	DNTEST, TAD I DNT3
0440	2367	ISZ DNT3
0441	2364	ISZ DNSAMC
0442	7041	CIA
0443	1365	TAD DNT1
0444	7640	SZA CLA
0445	5253	JMP DNNOTE,
0446	1767	TAD I DNT3
0447	7041	CIA
0450	1366	TAD DNT2
0451	7650	SNA CLA
0452	5262	JMP DNFINO
0453	1345	DNNOTE, TAD DNFUNC
0454	7001	IAC
0455	1367	TAD DNT3
0456	3367	DCA DNT3
0457	2363	ISZ DNKTR
0460	5237	JMP DNTEST

TAD (15

/DNSRCH-DIRECTORY SEARCH

0461	5231		JMP DNINP1
0462	1345	DNFIND,	TAD DNFUNC
0463	1367		TAD DNT3
0464	3367		DCA DNT3
0465	1767		TAD I DNT3
0466	7044		CMA RAL
0467	7730		SPA SZL CLA
0470	5254		JMP DNNOTF+1
0471	1356		TAD DN200
0472	3350		DCA DNLINK
0473	1364		TAD DNSAMC
0474	7041		CIA
0475	3364		DCA DNSAMC
0476	3366		DCA DNT2
0477	1364	DNINP2,	TAD DNSAMC
0500	3365		DCA DNT1
0501	4337		JMS DNBLKI
0502	1361		TAD DNM2
0503	3367		DCA DNT3
0504	1360		TAD DN77
0505	3346	DNPASS,	DCA DNBLOK
0506	1362		TAD DNM200
0507	3363		DCA DNKTR
0510	1347		TAD DNCORE
0511	3337		DCA DNBLKI
0512	1737	DNLOOP,	TAD I DNBLKI
0513	0346		AND DNBLOK
0514	1365		TAD DNT1
0515	7650		SNA CLA
0516	5335		JMP DNSMFD
0517	2337		ISZ DNBLKI
0520	2366		ISZ DNT2
0521	2363		ISZ DNKTR
0522	5312		JMP DNLOOP
0523	1365		TAD DNT1
0524	7006		RTL
0525	7006		RTL
0526	7006		RTL
0527	0357		AND DN7700
0530	3365		DCA DNT1
0531	1357		TAD DN7700
0532	2367		ISZ DNT3
0533	5305		JMP DNPASS
0534	5277		JMP DNINP2
0535	1366	DNSMFD,	TAD DNT2
0536	5617		JMP I DNSRCH
0537	0000	DNBLKI,	0
0540	1350		TAD DNLINK
0541	7450		SNA
0542	5773		JMP BOOT
0543	3346		DCA DNBLOK
0544	4753		JMS I SYSTIO
0545	0003	DNFUNC,	3
0546	0000	DNBLOK,	0
0547	3000	DNCORE,	DNBUFF
0550	0000	DNLINK,	0
0551	5773		JMP BOOT
0552	5737		JMP I DNBLKI
0553	7642	SYSTIO,	7642
0554	0177	DNSTRT,	177
0555	7747	DNKT,	-31
0556	0200	DN200,	200

0557 7700 DN7700, 7700
0560 0077 DN77, 77
0561 7776 DNM2, -2
0562 7600 DNM200, -200
0563 0000 DNKTR, 0
0564 0000 DNSAMC, 0
0565 0000 DNT1, 0
0566 0000 DNT2, 0
0567 0000 DNT3, 0
DNBUFF=3000
LIST=POINT+1

0573 0335
0574 3001
0575 2000
0576 7530
0577 0015

.
?
.
C

